

Appl. No. 10/567,713
Amdt. Dated September 3, 2010
Reply to Office Action of June 7, 2010

Attorney Docket No. 1002.104
Customer No.: 95674

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 7, 2010. Claim 1 is an independent claim. Claims 1, 4, and 5 have been amended. Claims 6 and 7 have been added. Support for newly added claim 6 is found, *inter alia*, in original claim 17. Support for newly added claim 7 is found, *inter alia*, on page 13, second paragraph of the original specification.

Reconsideration and entrance of the amendment in the application are respectfully requested.

Art-Based Rejections

Claims 1-5 were rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (instant specification, pages 1 & 2) in view of Sagawa et al (US 5,672,363) and Clymer et al (US 3,957,408).

Applicant respectfully traverses the rejections and submits that the claims herein are patentable in light of the clarifying amendments above and the arguments below.

The present application is generally directed to a magnetic field molding device for producing a ferrite sintered magnet.

As defined by amended independent Claim 1, a magnetic field molding device used in producing a ferrite sintered magnet includes a die for compression-molding a molding slurry. The slurry is produced by dispersing a powder mainly composed of ferrite in a dispersion medium and injected into the die. A magnetic field generating source for applying a magnetic field to the slurry within the die in a given direction is provided. A temperature control unit is provided for controlling the temperature of the die, into which the molding slurry is injected, and the temperature of the molding slurry by heating the die. The temperature control unit includes a heater provided in the die for heating the die as well as a controller for controlling the heater. A heater-holding mechanism is provided along the delivery path to hold the heater for heating the die. The die is provided with a plurality of cavities for producing a plurality of molded bodies for

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a plurality of the ferrite sintered magnets. The die is provided with delivery paths for injecting the slurry into each of the cavities.

The applied references fail to disclose, teach or even suggest the above features of the claims of the present invention. In particular, the applied references fail to disclose or suggest “a temperature control unit for controlling the temperature of the die, into which the molding slurry is injected, and the temperature of the molding slurry by heating the die, the temperature control unit comprising a heater provided in the die for heating the die and a controller for controlling the heater,” as required by amended independent Claim 1 of the present invention.

Moreover, the applied references fail to teach or suggest “a heater-holding mechanism provided along the delivery path to hold the heater for heating the die,” as required by amended independent Claim 1 of the present invention.

Referring to Sagawa, as one of ordinary skill in the art would appreciate, that reference fails to disclose the temperature control unit of the present invention. Specifically, although Sagawa discloses that “The obtained green compacts were cured at 120 degrees for 1 hour,” (see, Sagawa, Col. 36, ll. 25-26 (EXAMPLE 4),) the disclosed process is for curing the resin contained in the green compacts, a completely distinct process than the heating of the die and slurry in the present invention.

The advantageous effects of the present invention are described in the Present Specification. For example, as described in the last paragraph of page 16 and first paragraph of page 17 of the present specification,

Heating the mortar-shaped die 19 can increase slurry temperature in the cavity 13 more assuredly than heating the slurry before it is injected into the die, and consequently more efficiently reduces viscosity of the dispersion medium in the slurry and improves the dehydration properties of the slurry, thereby improving product yield. As discussed above, the cavities 13 can be uniformly heated even in a die provided with a plurality of cavities 13 or large-size die, to equalize density itself of the molded body as a result. Moreover, heating the mortar-shaped die 19 makes the magnetic field molding device 10 less sensitive to seasonally fluctuating ambient temperature, allowing it to produce a ferrite magnet of stable quality.

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Moreover, one of ordinary skill in the art would appreciate another significant distinction between the disclosure of Sagawa and the present invention is that Sagawa's apparatus is used for producing a **bonded magnet**, not a ferrite sintered magnet of the present invention.

Concerning the Clymer reference, that reference is related to a molding machine for making crayons or other elongated moldable articles (*See, Clymer, Col. 1, ll. 5-11*). In contrast, the present invention is related to a magnetic field molding device used in producing a ferrite sintered magnet.

Clymer refers to a temperature control means and describes that the mold table compartments are heated or cooled by water supplied through a water manifold 70 mounted on the center post 51. (*See, Clymer, Claims 1, 5; Col. 3, ll. 34-36*). As one skilled in the art would recognize, amended independent Claim 1 of the present invention requires, the temperature control unit comprises a heater which is provided in the die. That is, the heater directly heats the die since it is provided in the die. In contrast, Clymer fails to disclose such a heater which is provided in the die. Although a heater and thermostat are shown in FIG. 5 of Clymer, the heater is not provided in the die.

Moreover Clymer fails to disclose a heater-holding mechanism provided along the delivery path to hold the heater for heating the die, as required by amended independent Claim 1 of the present invention.

Furthermore, amended independent Claim 1 of the present invention requires a die compression-molds a molding slurry, wherein "the slurry is produced by dispersing a powder mainly composed of ferrite in a dispersion medium." In contrast, in Clymer, the wax is injected into the vertical mold tubes of the mold table 11.

Furthermore, according to amended independent Claim 1 of the present invention, the die is provided with a plurality of cavities for producing a plurality of molded bodies for a plurality of the ferrite sintered magnets. However, Clymer does not mention ferrite sintered magnets since, as pointed out above, that reference is related to a molding machine for making crayons or the like.

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Furthermore, Clymer fails to disclose a die for compression-molding a molding slurry, and a magnetic field generating source for applying a magnetic field to the slurry within the die in a given direction, as required by amended independent Claim 1 of the present invention.

Since the cited reference fails to disclose, teach or suggest the above features recited in amended independent Claim 1, these references cannot be said to anticipate nor render obvious the invention which is the subject matter of that claim.

Accordingly, amended independent Claim 1 is believed to be in condition for allowance and such allowance is respectfully requested.

The remaining claims depend either directly or indirectly from amended independent Claim 1 and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are therefore also believed to be in condition for allowance. For example, with respect to New dependent Claim 7, it is noted that Clymer discloses that the compartment 14 is heated and the compartment 14a is cooled (*See, Clymer, Col. 4, ll. 29-35; FIG. 4*). In contrast, dependent Claim 7 requires that each of the cavities be uniformly heated by the temperature control unit in the present invention. This requirement further distinguishes the present application over the applied references.

Conclusion

Accordingly, it is respectfully submitted that the present invention is inventive over the combination of Sagawa, Clymer and the admitted prior art. Please note that the admitted prior art also fails to disclose that each of the cavities is uniformly heated by heating the die.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 223-2365 to discuss the steps necessary for placing the application in condition for allowance.

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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-5225.

Respectfully submitted,
ADLI LAW GROUP P.C.

Date: September 3, 2010

By: /s/ Dariush G. Adli
Dariush G. Adli
Registration No. 51,386
Attorney for Applicant(s)

633 West Fifth Street, Suite 2600
Los Angeles, California 90041
Phone: 213-223-2365
Fax: 213-223-2368
Email: ip@adlilaw.com